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EXAMINER

NICKOL, GARY B

ART UNIT PAPER NUMBER

1642

DATE MAILED: 11/27/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,580

Applicant(s)

HANNA ET AL.

Examiner

Gary B. Nickol Ph.D.

Art Unit

1642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 37 is/are pending in the application.
- 4a) Of the above claim(s) 14,15 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13,16-18,20-22 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

The Election filed September 23, 2002 (Paper No. 5) in response to the Office Action of August 21, 2002 is acknowledged and has been entered.

Claims 1-22, and 37 are pending.

Claims 14-15 and 19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 5.

Claims 1-13, 16-18, 20-22 and 37 are pending in the application and are currently under prosecution.

Applicant's election with traverse of the species requirement is acknowledged. Applicants argue that the detergent, oil, and micelle-forming agent have obtained generic protection in several prior patents and should all be examined together. This is not found persuasive. The species identified represent materially distinct products with different structures and different functions and would require different searches and the consideration of different patentability issues. Applicants further traverse the species requirement of claims 18/19 because all of the moieties operate via a similar mechanism in that they are all TGF β antagonists and antagonize immunosuppressants secreted by the host. This argument has been considered but is not found persuasive because the species identified are materially distinct products with different structures. As written, Claim 18 encompasses antibodies, any analog of TGF β , fusion proteins, etc. which would require different searches and the consideration of different patentability issues.

Art Unit: 1642

For these reasons the species requirements are deemed to be proper and are therefore made FINAL.

Specification

The specification is objected to for the following reason: The specification on page 1 should be amended to reflect the current priority status of the present application, for example:

This application is a continuation of U.S. Serial No. 08/933,359, filed September 18, 1997, now abandoned.

Claim Objections

Claim 17 is objected to for reciting "wherein said immunosuppressive factors is TGF β " which is grammatically incorrect.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

Art Unit: 1642

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-13, 16-18, 20-22 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raychaudhuri *et al.* (US Patent No. 5,695,770, June 1995) and Hoefer *et al.* (Cancer Immunol. Immunother, 1995, Vol. 41, pages 302-308).

Raychaudhuri *et al.* teach a composition useful for treating cancer, viral or parasitic disorders (column 4, lines 5+) comprising an admixture comprising a cancer, viral or parasitic antigen expressed by said cancer, virally or parasitic infected cells and a microfluidized antigen formulation comprising a stabilizing detergent, a micelle-forming agent, and a biodegradable and biocompatible oil wherein said antigen formulation is formulated as a stable oil-in-water emulsion (column 4, lines 29+) wherein the detergent is TWEEN 80, wherein the detergent is provided in an amount ranging from approximately 0.05 to 0.5%, wherein the amount of detergent is about 0.2% (column 4, lines 45+). Raychaudhuri *et al.* further teach that said micelle-forming agent is poloxamer 401 (column 7, lines 28+), wherein said micelle-forming agent has a hydrophile-lipophile balance of between 0 and 2 (column 4, line 65), and wherein said micelle-forming agent ranges from between 1.25 and 5% or 0.5 to 10% (column 5, lines 1+). Raychaudhuri *et al.* further teach that said oil is squalene, wherein the amount of said oil ranges from between 1 and 10% or 2.5 and 5% and exhibits a melting temperature of less than 65°C (column 5, lines 4+). Raychaudhuri *et al.* further teach that said antigen is selected from the group consisting of papillomavirus E7 protein (column 6, lines 4-5; column 20, lines 45+).

Raychaudhuri *et al.* do not teach the antigen formulation above *in combination* with at least one agent which is capable of neutralizing or down regulating the activity of immunosuppressive factors, wherein said immunosuppressive factor is TGF β and wherein said agent is an anti-TGF β antibody.

Hoefer *et al.* teach a composition useful for treating cancer comprising an agent which is capable of neutralizing or down regulating the activity of TGF β wherein said agent is an anti-TGF β antibody and/or TGF β antagonist. Hoefer *et al.* further teach that said composition is useful for treating cancer (abstract; and page 305, 2nd column). Hoefer *et al.* further teach that treatment with the TGF β antagonist showed a dramatic suppression of the development of primary tumors, and that all treated mice showed a complete or at least partial suppression of the development of distant metastases (page 306, 1st column).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to combine the antigen formulation of Raychaudhuri *et al.* with the TGF β antagonist of Hoefer *et al.* into a single composition since both agents have individually been taught in the prior art to be useful for the treatment of cancer. One would have been motivated to do so because Raychaudhuri *et al.* successfully demonstrate the use of the antigen formulation for the inhibition of tumor cell growth in vivo (column 20), and Hoefer *et al.* successfully demonstrate the inhibition of tumor cell growth and metastases in vivo using a composition comprising a TGF β antagonist. Thus, with the knowledge that both compositions, individually, are useful as anti-tumor agents, it would have been obvious to combine the two compositions because one would have a reasonable expectation that the combination of the two agents would achieve a greater anti-tumor response than either agent alone. The instant situation is amenable

Art Unit: 1642

to the type of analysis set forth in In re Kerkhoven, 205 USPQ 1069 (CCPA 1980) wherein the court held that it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose since the idea of combining them flows logically from their having been individually taught in the prior art.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary B. Nickol Ph.D. whose telephone number is 703-305-7143. The examiner can normally be reached on M-F, 8:30-5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa can be reached on 703-308-3995. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Gary B. Nickol, Ph.D.
Examiner
Art Unit 1642

GBN
November 26, 2002

